Understanding Empathetic Shifts During the COVID-19 Pandemic in Online Mental Health Communities
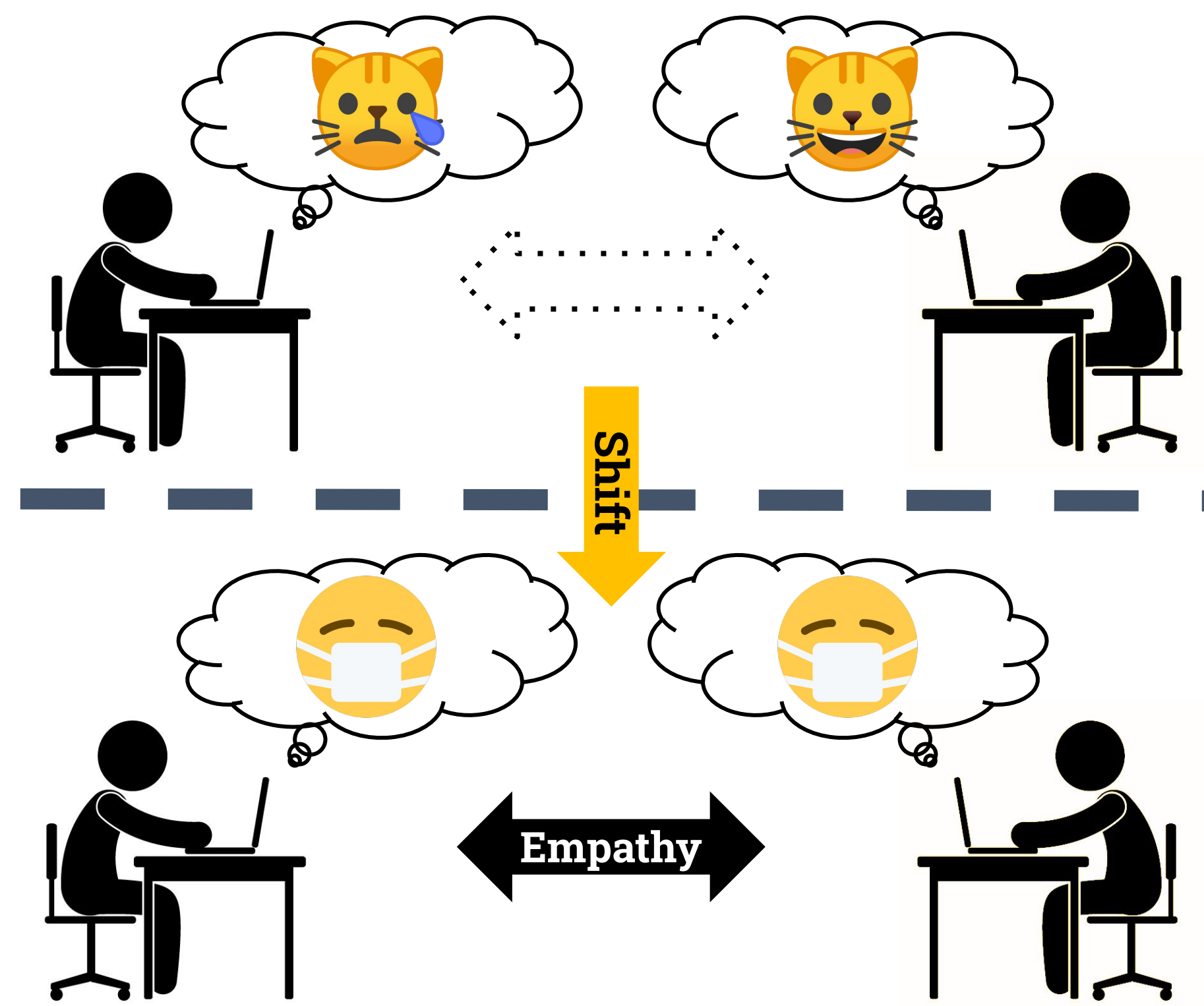
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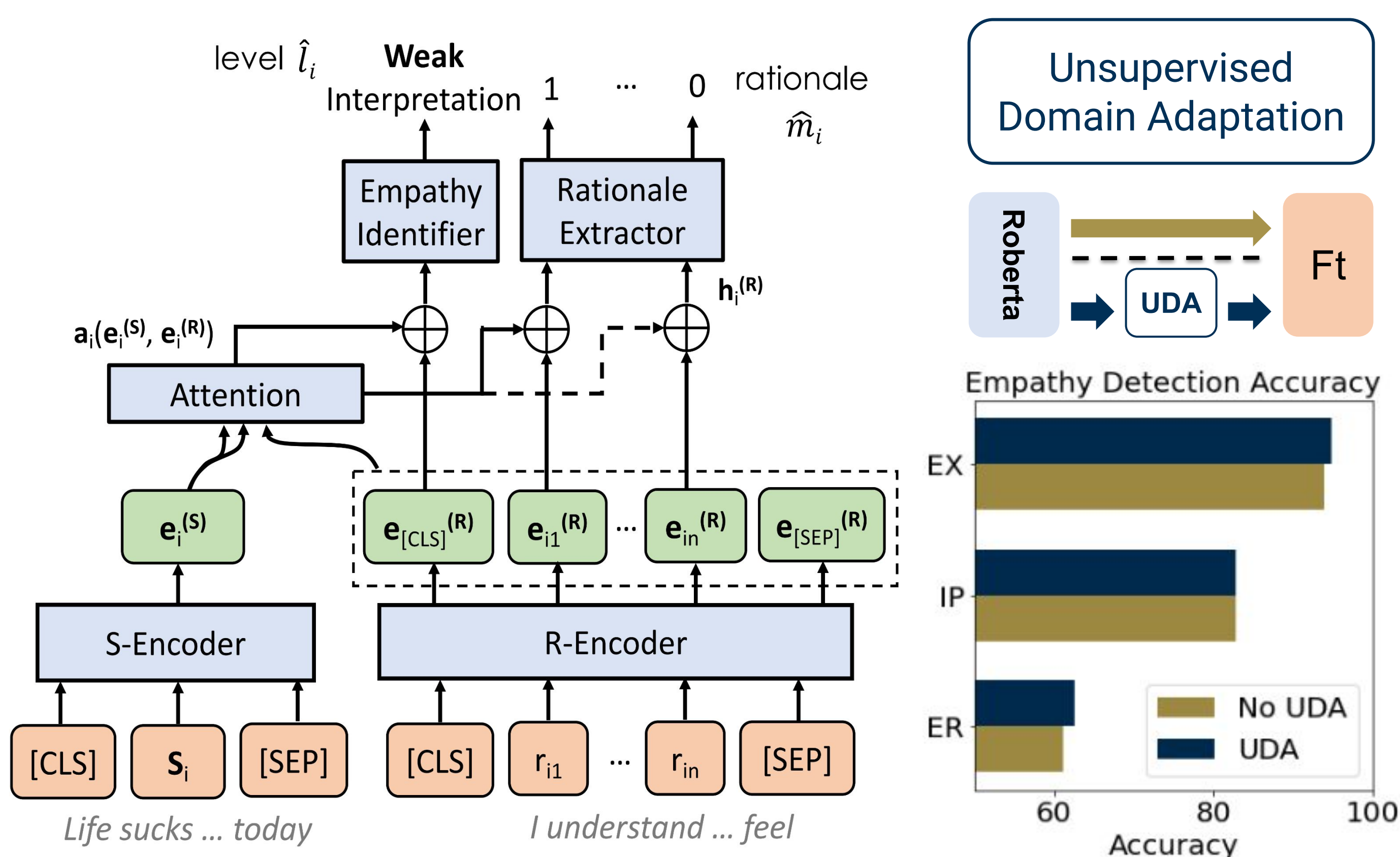
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Introduction

Hypothesis

(**i**) The shared experience of the COVID-19 pandemic has created a greater potential global empathetic connection, leading to a positive shift in empathetic expression patterns in Online Mental Health Communities (OMHCs).

(**ii**) Positive empathetic shifts have created a more prosocial discourse between Seekers and Supporters in OMHCs in posts related to COVID-19.

Empathy Framework

Sharma et al. (2020)

Seeker	Supporter		
△	○		"I am about to have an anxiety attack."
Emotional Reactions		**Weak**	"Everything will be fine."
△	😭	**Strong**	"I feel really sad for you."
Interpretations		**Weak**	"I understand how you feel."
▲	●	**Strong**	"I also have anxiety attacks at times."
Explorations		**Weak**	"What happened?"
△	❓	**Strong**	"Are you feeling alone right now?"

Empathy Detection

Data

Collected and Analyzed Data: from Pushshift Reddit Dataset.

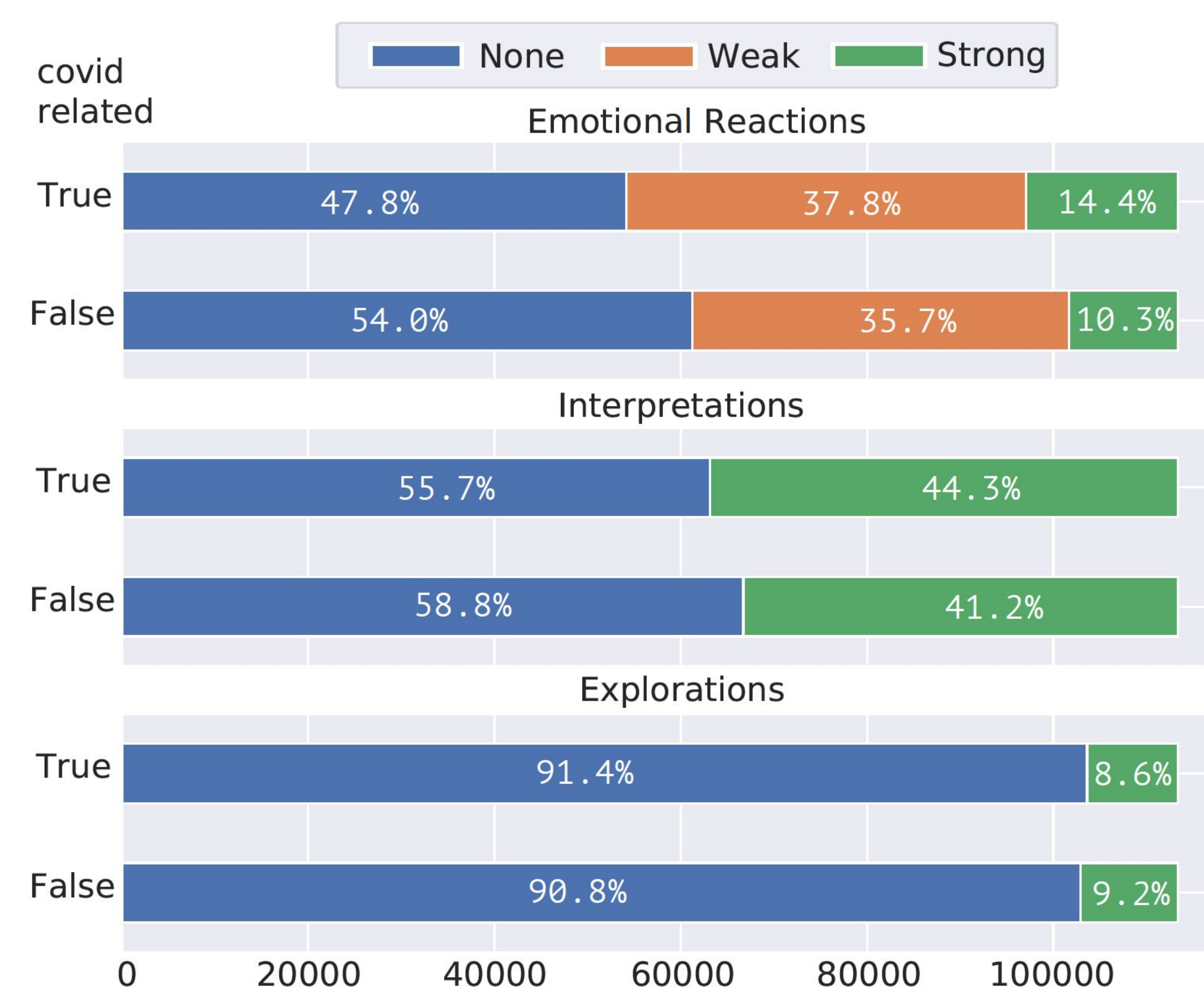| Category	Subreddit	#Seeker post	#Response post	#Seeker	#Supporter
Coping & Therapy	r/getting_over_it	469	876	354	546
	r/GriefSupport	5831	13670	4596	6074
	r/helpmecope	378	592	330	348
	r/offmychest	33705	83630	28068	48404
	r/MMFB	970	2016	777	1153
	r/therapy	3994	7028	3464	3727
Mood Disorders	r/depressed	2176	3618	1821	2445
	r/depression	23606	40354	19188	23790
	r/lonely	9597	20328	7351	12166
	r/mentalhealth	16076	27590	13321	13455
	r/SuicideWatch	15902	24810	12721	14417
	Total	113782	226762	92724	127603

Empathy Detection Training Data: Released by Sharma et al. (2020), the training data (labeled using the proposed empathy framework) contains 3,081 examples from 55 mental health focused subreddits.

Empathy Detection Evaluation Data: Using the same empathy framework, we labeled 450 examples of collected data as a team (average Fleiss' Kappa = 0.57 on 30 examples).
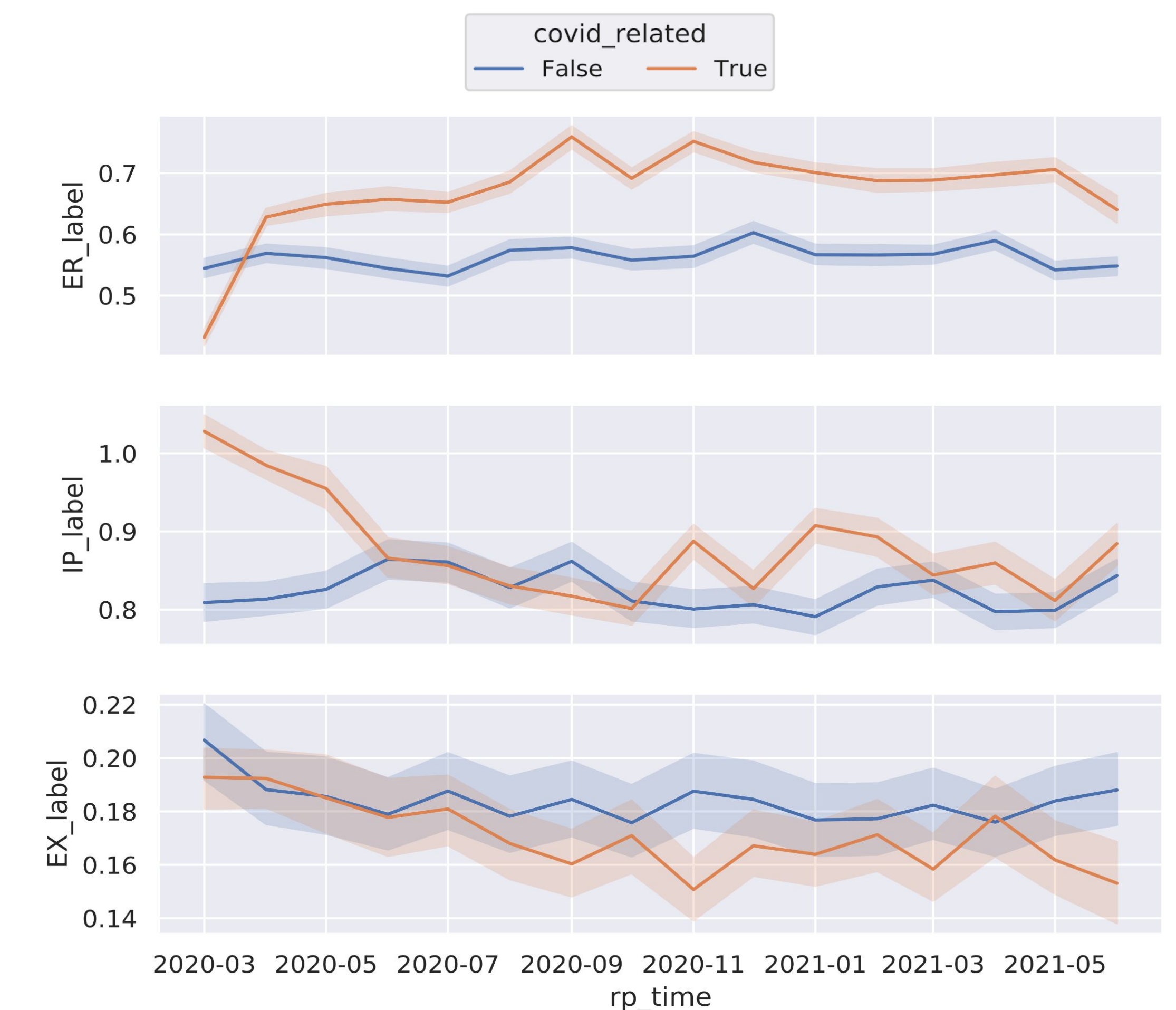
Findings

Does the expressed empathy level under help-seeking posts differ in COVID-related contexts and non-related ones?

Significantly **higher** levels of empathy are expressed via emotional reactions and interpretations in COVID contexts, while **less** are expressed via exploration.
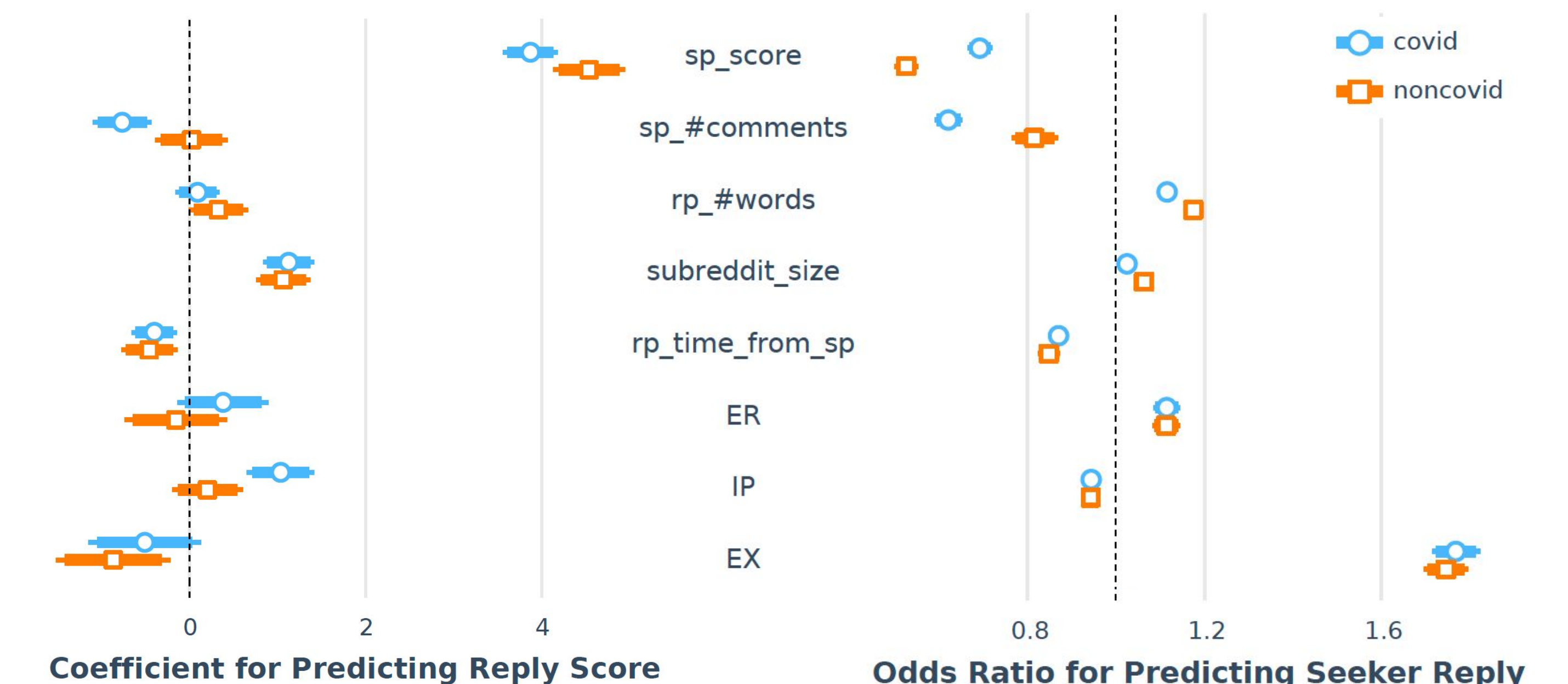

Level of emotional reactions and interpretations show a reverse trend at the initial stage of the pandemic, prior to greater public understanding.

Does higher level of expressed empathy lead to more positive feedback from help seeker and community?

Responses with stronger interpretation receive more upvotes from the community, especially in COVID context.

Responses with stronger emotional reaction and exploration are more likely to receive replies from help-seeker.

Conclusion & Future Implications

- We are seeing a trend in greater empathetic statements (via emotion and interpretation) during the pandemic, which has contributed to positive feedback from the seeker and community towards supporters.

- The findings can inform supporters on how to use different empathetic expression strategies to make more prosocial responses in OMHCs.

- We believe this work can inspire and support the design of further studies, and analysis of trends in empathetic communications of text-based communities.